

### **Amendments to the Claims**

This listing of claims will replace all prior versions, and listings of claims in the application:

#### **Listing of Claims:**

Claims 1-21 (Canceled)

Claim 22 (Currently Amended): An ~~Impedance~~ electrical impedance cell sizing apparatus for characterizing particles suspended in a liquid, comprising a housing with a mixing chamber and a collection chamber separated by a polymer membrane containing an orifice for passage of the particles between the mixing chamber and the collection chamber for impedance determination of the particles, wherein a diameter the deviation of the orifice is in a range from 10  $\mu$ m to 1,000  $\mu$ m ~~diameter along a longitudinal axis of the orifice ranges from  $\pm 1\%$  to  $\pm 10\%$  whereby a substantially homogenous electrical field at the centre of the orifice is provided.~~

Claim 23 (Currently Amended): An ~~Impedance~~ electrical impedance cell sizing apparatus according to claim 22, wherein the orifice has rounded edges at one of the sides of the membrane whereby perturbations of an electrical field at ~~[[the]]~~ an orifice entrance are minimized ~~minimised~~ and a substantially homogenous electrical field at

the center centre of the orifice ~~[[are]]~~ is provided.

Claim 24 (Currently Amended): An ~~Impedance~~ electrical impedance cell sizing apparatus according to claim 23, wherein ~~[[the]]~~ a radius of curvature of the rounded edges is substantially equal to ~~[[1/4'th]]~~ 1/4<sup>th</sup> the diameter of the orifice.

Claim 25 (Currently Amended): An ~~Impedance~~ electrical impedance cell sizing apparatus according to claim 22, wherein ~~[[the]]~~ a surface roughness of ~~[[the]]~~ an internal surface of the orifice is in ~~[[the]]~~ a range from 0  $\mu\text{m}$  to 5  $\mu\text{m}$ , whereby a substantially homogenous electrical field at the centre a center of the orifice ~~may be~~ is provided.

Claim 26 (Currently Amended): An electrical impedance cell sizing apparatus according to claim 22, wherein the orifice diameter ~~outside the rounding ranges from 10  $\mu\text{m}$  to 1000  $\mu\text{m}$ , such as~~ is in a range from 30  $\mu\text{m}$  to 75  $\mu\text{m}$ ~~[[,]] such as app. equal to 50  $\mu\text{m}$ .~~

Claim 27 (Currently Amended): An electrical impedance cell sizing apparatus according to claim 22, wherein the orifice diameter ~~outside the rounding ranges from 5  $\mu\text{m}$  to 200  $\mu\text{m}$ , such as from 10  $\mu\text{m}$  to 50  $\mu\text{m}$ , such as app. equal to~~ is 50  $\mu\text{m}$ .

Claim 28 (Currently Amended): An electrical impedance cell sizing apparatus according to claim 22, wherein a length of the orifice-length ranges from 1  $\mu\text{m}$  to 1000  $\mu\text{m}$ [[,]] such as app. equal to 50  $\mu\text{m}$ .

Claim 29 (Currently Amended): An ~~Impedance~~ electrical impedance cell sizing apparatus according to claim 22, wherein the membrane is positioned in a single-use cartridge.

Claim 30 (Currently Amended): An ~~Impedance~~ electrical impedance cell sizing apparatus according to claim 22, further comprising  
  
a bore in [[the]] an outer surface of the housing for entrance of [[the]] a liquid sample, communicating with  
  
a sampling member positioned in the housing for sampling the liquid sample and having a cavity for receiving and holding the liquid sample, the sampling member being movably positioned in relation to the housing in such a way that[[,]] in a first position[[,]] the cavity is in communication with the bore for entrance of the liquid sample into the cavity, and[[,]] in a second position[[,]] the cavity is in communication with the mixing chamber for discharge of the liquid sample into the mixing chamber.

Claim 31 (New): An electrical impedance cell sizing apparatus according to claim 22, wherein deviation of the orifice diameter along a longitudinal axis of the orifice ranges from  $\pm 1\%$  to  $\pm 10\%$ , whereby a substantially homogenous electrical field is provided at a center of the orifice.

Claim 32 (New): An electrical impedance cell sizing apparatus according to claim 22, wherein a largest cross-sectional dimension of the orifice is from  $10\ \mu\text{m}$  to  $50\ \mu\text{m}$ .